



A.D. 1865, *3rd JANUARY.* N^o 16.

S P E C I F I C A T I O N

OF

THOMAS JOHN ASHTON.

SURGICAL PNEUMATIC APPARATUS.

LONDON:

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1865.



A.D. 1865, 3rd JANUARY. N° 16.

Surgical Pneumatic Apparatus.

LETTERS PATENT to Thomas John Ashton, of Cavendish Square, in the County of Middlesex, Surgeon, for the Invention of “**AN IMPROVED PORTABLE PNEUMATIC APPARATUS APPLICABLE IN SURGERY AND MEDICINE, FOR ALL PURPOSES AS A DOUCHE FOR AFFUSION, IRRIGATION, INJECTION, AND FOR ENEMAS.**”

Sealed the 23rd June 1865, and dated the 3rd January 1865.

PROVISIONAL SPECIFICATION left by the said Thomas John Ashtor, a the Office of the Commissioners of Patents, with his Petition, on the 3rd January 1865.

I, THOMAS JOHN ASHTON, of Cavendish Square, in the County of Middlesex,
5 Surgeon, do hereby declare the nature of the said Invention for “**AN IMPROVED PORTABLE PNEUMATIC APPARATUS APPLICABLE IN SURGERY AND MEDICINE FOR ALL PURPOSES AS A DOUCHE FOR AFFUSION, IRRIGATION, INJECTION, AND FOR ENEMAS,**” to be as follows:—

This improved pneumatic apparatus is applicable for administering douches
10 or injections for all surgical or medicinal purposes, and the principal object of the Invention is to construct a portable and effective apparatus, and at the same time to prevent the injection of any air with the water or other liquid composing the douche or injection. The apparatus is composed principally of

Ashton's Improved Surgical Pneumatic Apparatus.

two vessels (one contained within the other), each vessel being made of an impermeable material, the inner one being flexible and compressible, (india-rubber by preference) and the outer one inelastic, being either made of a rigid material or of a compressible substance, such as canvas or other textile material lined with india-rubber as may be preferred. Each of these vessels 5 is furnished with a tube provided with a stop-cock, but there is no communication whatever between the two vessels. A small detachable syringe or air pump for charging the outer vessel with compressed air is also provided. The action of the apparatus is as follows:—The inner vessel is to be filled with the water (or other liquid composing the douche or injection) by means 10 of a funnel, and the latter being removed its stop-cock is then closed. Air is then compressed into the outer vessel by means of the syringe or air pump until a sufficient pressure is obtained according to the force desired. Upon closing the stop-cock of the outer vessel and removing the syringe the apparatus is now ready for use, and upon the stop-cock of the inner vessel 15 being opened the expansion of the compressed air in the outer vessel will compress the inner vessel and force out the water or liquid which it contains, the force of the stream depending upon the amount of air that had been previously compressed into the outer vessel. If a more continuous and undiminished force is desired than can be obtained by these means, the stop- 20 cock of the outer vessel may remain open and the syringe be kept at work during the operation.

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said Thomas John Ashton, in the Great Seal Patent Office on the 3rd July 1865.

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TO ALL TO WHOM THESE PRESENTS SHALL COME, I, THOMAS JOHN ASHTON, of Cavendish Square, in the County of Middlesex, Surgeon, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Third day of January, in the year of our Lord 30 One thousand eight hundred and sixty-five, in the twenty-eighth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Thomas John Ashton, Her special licence that I, the said Thomas John Ashton, my executors, administrators, and assigns, or such others as I, the said Thomas John Ashton, my executors, administrators, and assigns, 35 should at any time agree with, and no others, from time to time and at all

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times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for “AN IMPROVED PORTABLE PNEUMATIC APPARATUS APPLICABLE IN SURGERY AND MEDICINE FOR ALL 5 PURPOSES AS A DOUCHE FOR AFFUSION, IRRIGATION, INJECTION, AND FOR ENEMAS,” upon the condition (amongst others) that I, the said Thomas John Ashton, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be per- 10 formed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Thomas John Ashton, do hereby declare the nature of my said Invention, and in what manner the same is to be 15 performed, to be particularly described and ascertained in and by the following statement in writing, and on reference to the accompanying Sheet of Drawings, that is to say :—

This improved pneumatic apparatus is applicable for administering douches or injections for all surgical or medicinal purposes, and the principal object of 20 the Invention is to construct a portable and effective apparatus, and at the same time to prevent the injection of any air with the water or other liquid composing the douche or injection. The apparatus is composed principally of two vessels (one contained within the other), each vessel being made of an impermeable material, the inner one being flexible and compressible (india- 25 rubber by preference), and the outer one inelastic, being either made of a rigid material or of a compressible substance, such as canvas or other textile material lined with india-rubber as may be preferred. Each of these vessels is furnished with a tube provided with a stop-cock, but there is no communication whatever between the two vessels. A small detachable or fixed syringe 30 or air pump for charging the outer vessel with compressed air is also provided. The action of the apparatus is as follows:—The inner vessel is to be filled with the water (or other liquid composing the douche or injection) by means of a funnel or otherwise, and the latter being removed its stop-cock is closed. Air is then compressed into the outer vessel by means of the syringe or air 35 pump until a sufficient pressure is obtained according to the force desired. Upon closing the stop-cock of the outer vessel and removing the syringe (if detachable) the apparatus is now ready for use, and upon the stop-cock of the inner vessel being opened the expansion of the compressed air in the outer vessel will compress the inner vessel and force out the water or liquid which

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it contains, the force of the stream depending upon the amount of air that had been previously compressed into the outer vessel. If a more continuous and undiminished force is desired than can be obtained by these means the stop-cock of the outer vessel may remain open and the syringe be kept at work during the operation.

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Such being the nature and object of my said Invention for "An Improved Portable Pneumatic Apparatus applicable in Surgery and Medicine for all Purposes as a Douche for Affusion, Irrigation, Injection, and for Enemas," I will now proceed to describe more in detail the manner in which the same is to be or may be performed or carried into practical effect, and in order that the same may be distinctly understood I have annexed hereunto a Sheet of Drawings illustrative thereof, and have marked the same with figures and letters of reference corresponding with those in the following explanation thereof, that is to say:—

Figure 1 in the annexed Drawing is an elevation of a modification of my improved apparatus wherein the outer case is made of metal or other rigid material; and Figure 2 is a vertical section of the same; Figure 3 is a vertical section of a modification of the same wherein the outer vessel is made of a compressible substance such as canvas or other textile material lined with india-rubber.

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In Figures 1 and 2, *a, a* is the outer vessel or metal case into which the air is compressed, and *b, b*, is the inner or flexible vessel which receives the water or other fluid to be used; *c, c*, is a condensing syringe or air pump for compressing air into the vessel *a, a*; and *d, d*, is a stop-cock for discharging the air therefrom when required; *e, e*, is a short tube provided with a screw cap *f, f*, by removing which the inner vessel can be conveniently charged; *g, g*, is the flexible tube having a stop-cock at *h, h*, and provided at the other end with the usual jet.

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To charge the apparatus, first screw on the flexible tube *g, g*, and close the stop-cock *h, h*. The stop-cock *d, d*, of the air vessel *a, a*, being open, reverse the apparatus, unscrew the cap *f, f*, and after filling the vessel *b, b*, with the water or other fluid to be used, replace the cap *f, f*, screwing it firmly. Close the stop-cock *d, d*, and charge the vessel *a, a*, with compressed air by making from twenty-five to thirty quick strokes of the condensing syringe or air pump *c, c*. The apparatus is now charged and ready for use, and when the jet and flexible tube are properly adjusted it is merely requisite to open the stop-cock *h, h*, when the pressure of the air in the vessel *a, a*, upon the exterior of the elastic vessel *b, b*, will cause the water or other fluid to be forced out of the latter through the elastic tube with a force propor-

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tioned to the density to which the air has been compressed in the vessel *a, a*. After using the apparatus the stop-cock *d, d*, should be opened to allow the air to escape from the vessel *a, a*, and permit the elastic vessel *b, b*, to assume its original form.

5 Figure 3 is a modification of the above, which will require no further explanation excepting that the outer vessel *a, a*, is compressible (but inelastic,) being formed of canvas and india-rubber, and instead of having an inner vessel I divide the vessel *a, a*, into two compartments by a flexible elastic diaphragm *b, b*, the compartment for the compressed air on one side of
10 the diaphragm being in communication with the condensing syringe, and that for the water or other fluid on the other side thereof with the flexible tube.

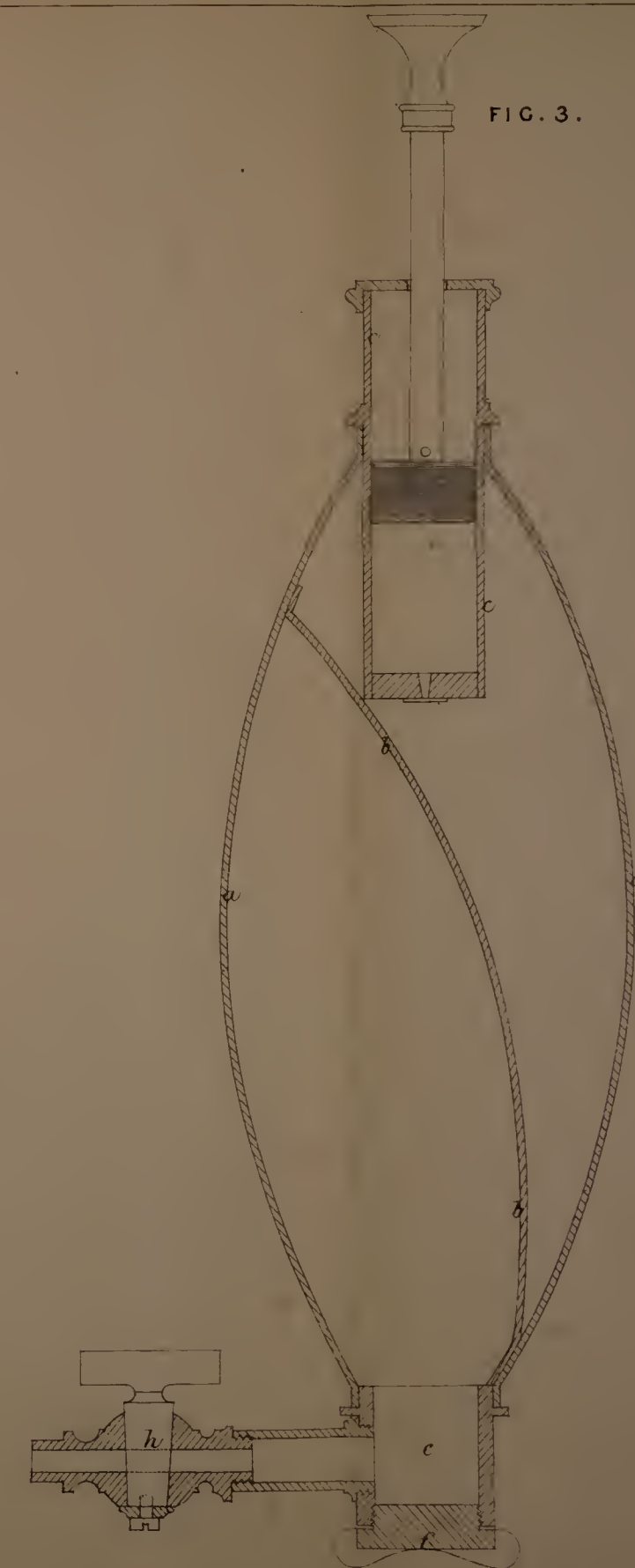
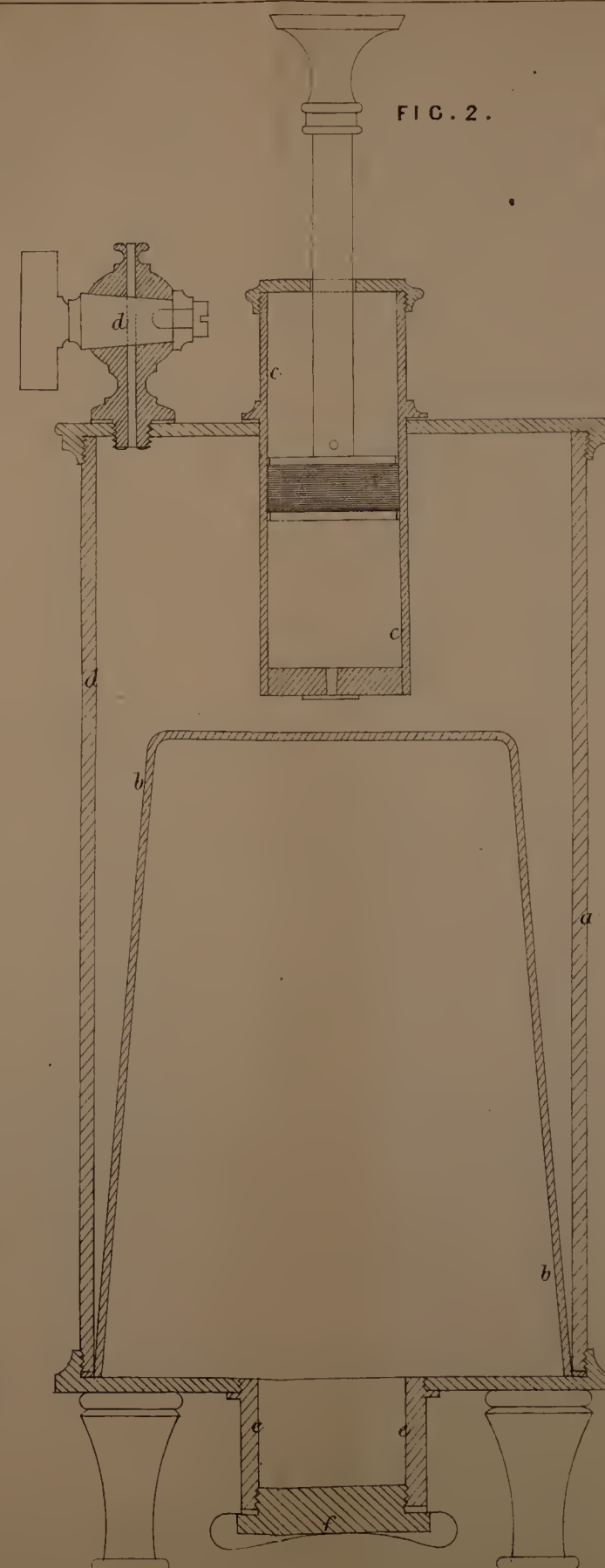
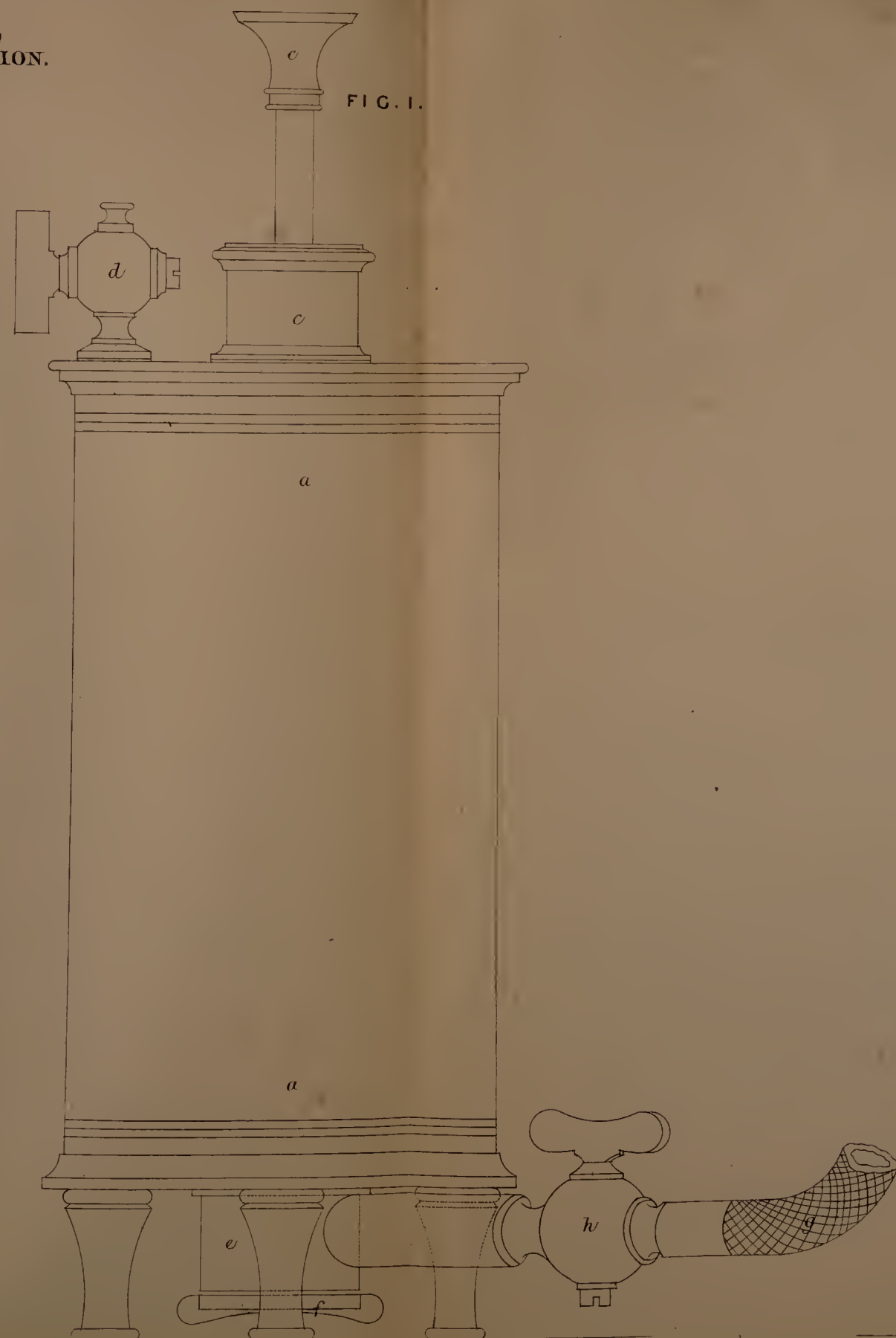
Having now described the nature and object of my said Invention for
“An Improved Portable Pneumatic Apparatus applicable in Surgery and
Medicine for all Purposes as a Douche for Affusion, Irrigation, Injection, and
15 for Enemas,” together with the manner in which the same is to be or may be performed or carried into practical effect, I would remark in conclusion that I claim as my Invention the improved pneumatic apparatus (for such purposes) above described and exhibited in the annexed Drawings, or any mere modification or imitation thereof operating in substantially the same or a
20 similar manner.

In witness whereof I the said Thomas John Ashton, have hereunto set my hand and seal, this Twenty-ninth day of June, in the year of our Lord One thousand eight hundred and sixty-five.

T. J. ASHTON. (L.S.)

LONDON:

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The filed drawing is not colored

Drawn on Stone by Malby & Sons.

